AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-8 (canceled).

Claim 9 (previously presented): A physiological quantity control and measuring circuit for a massage machine, the circuit detecting a physiological quantity of the person massaged and controlling the massage operation of the machine based on variations in the physiological quantity, the measuring circuit comprising:

at least one sensor, sensing a single physiological quantity:

a detection and signal processing circuit, for producing physiological quantity data based on a signal obtained from the sensor, comprising a plurality of signal converters each adapted to receive an input signal from the sensor and deliver a respective output signal corresponding to the single physiological quantity,

the signal converters exhibiting respective different signal conversion characteristics which are different in the relationship of the output signal to the input signal, the different signal conversion characteristics overlapping each other in an input range of the input signal,

the detection and signal processing circuit being operable to produce data to control the

massage operation based on the output signal, regardless of how many of the signal converters are used to convert the input signal into the output signal.

Claim 10 (previously presented): The physiological quantity control and measuring circuit according to claim 9, wherein the sensor is a skin temperature sensor for measuring skin temperature, and the detection and signal processing circuit includes two kinds of the signal conversion characteristics respectively for low temperatures and high temperatures which partly overlap each other in the temperature range to be measured.

Claim 11 (previously presented): The physiological quantity control and measuring circuit according to claim 10, wherein the signal processing circuit produces a series of items of skin temperature data in the process of giving the same massage to the same body part based only on physiological quantity detection signals resulting from the low-temperature signal conversion characteristics when said resulting detection signals are all included within the effective output range of the low-temperature signal conversion characteristics, or to produce a series of items of skin temperature data in the process based on physiological quantity detection signals resulting from the two kinds of signal conversion characteristics for high and low temperatures when said resulting detection signals are not all included within the effective output range of the low-temperature signal conversion characteristics.

Claim 12 (previously presented): The physiological quantity control and measuring circuit according to claim 9, wherein the sensor is a perspiration quantity sensor for measuring the resistance value between a pair of electrodes, and the detection circuit includes two kinds of the signal conversion characteristics respectively of low gain and high gain which overlap each other in the range of resistance values to be measured.

Claim 13 (previously presented): The physiological quantity control and measuring circuit according to claim 12 wherein the signal processing circuit produces a series of items of perspiration quantity data in the process of giving the same massage to the same body part based only on physiological quantity detection signals resulting from the high-gain signal conversion characteristics when said resulting detection signals are all included within the effective output range of the high-gain signal conversion characteristics, or to produce a series of items of perspiration quantity data in the process based on physiological quantity detection signals resulting from the low-gain signal conversion characteristics when said resulting detection signals are not all included within the effective output range of the high-gain signal conversion characteristics.